



A.D. 1853. N° 581.

S P E C I F I C A T I O N
OF
JACQUES FRANCISQUE PINEL.

DEODORIZING SEWAGE WATER AND
CESSPOOLS, AND MANUFACTURING
MANURES.

L O N D O N :
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A.D. 1853 N° 581.

**Deodorizing Sewage Water and Cesspools, and
Manufacturing Manures.**

LETTERS PATENT to Jacques Francisque Pinel, of Pall Mall, in the County of Middlesex, Agricultural Chemist, for the Invention of “**IMPROVEMENTS IN DEODORIZING SEWAGE WATER AND CESSPOOLS, AND IN MANUFACTURING MANURES.**”

Sealed the 1st July 1853, and dated the 8th March 1853.

PROVISIONAL SPECIFICATION left by the said Jacques Francisque Pinel at the Office of the Commissioners of Patents, with his Petition, on the 8th March 1853.

I, JACQUES FRANCISQUE PINEL, do hereby declare the nature of the
5 said Invention for “**IMPROVEMENTS IN DEODORIZING SEWAGE WATER AND CESSPOOLS, AND IN MANUFACTURING MANURES,**” to be as follows; viz.—

My Invention refers to deodorizing or purifying the water or contents of the sewers by the application of the following chemicals; namely, sulphate of zinc, potass, alum, chloride of sodium, and sand,
10 which precipitates the solid matter contained in the above sewer water or cesspools, &c., and afterwards manufacturing the solid residue so deposited into a manure, by combining them with the substances which concentrate the gases necessary to vegetation with the following

Pinel's Improvements in Deodorizing and Manufacturing Manures.

matters; namely, waste tan, pulverizing chloride of sodium, nitrate of soda, nitrate of potass, also soot, ashes, slacked lime, muriate of ammonia.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Jacques Francisque Pinel, in the Great Seal Patent Office, on the 8th September 1853.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JACQUES FRANCISQUE PINEL, of Pall Mall, in the County of Middlesex, Agricultural Chemist, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent bearing date the Eighth day of March, in the year of our Lord One thousand eight hundred and fifty-three, in the sixteenth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Jacques Francisque Pinel, Her special licence, that I, the said Jacques Francisque Pinel, my executors, administrators, and assigns, or such others as I, the said Jacques Francisque Pinel, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN DEODORIZING SEWAGE WATER AND CESSPOOLS, AND IN MANUFACTURING MANURES**," upon the condition (amongst others) that I, the said Jacques Francisque Pinel, by an instrument in writing under my hand and seal, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Jacques Francisque Pinel, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:

Pinel's Improvements in Deodorizing and Manufacturing Manures.

My Invention consists in or has reference to deodorizing sewerage water and cesspools, and manufacturing manures, by the application of the following matters and things, in manner hereafter stated, to the contents of sewers, cesspools, and other places affording cesspool matter
5 or sewage water; that is, I apply to such sewage water sulphate of zinc, potass, alum, chloride of sodium, and sand, so as to precipitate the solid matter contained in such cesspools and sewage water, and manufacture the solid residue so deposited into manure by combining it with the substances that will concentrate the gases necessary to vegetation, as
10 hereafter stated; for instance, waste tan, pulverized chloride of sodium, nitrate of potass, soot, ashes, slaked lime, and muriate of ammonia. The sewerage or cesspool matter or other refuse of towns is first collected into suitable tanks or reservoirs, either in a liquid or solid state, when I deodorize and precipitate the solid matter with the following compound
15 of the substances above-named, in the proportions as follows to each ton of solid matter, viz.:—

- 6 (lbs.) pounds alum,
- 4 (lbs.) pounds sulphate zinc,
- 1 (lb.) pound chloride of sodium or muriate of soda,
- 20 2 (lbs.) pounds sand (washed),
- 2 ounces sulphate of copper.

After the above are well mixed together, I then throw the compound mass so formed into the sewerage water or night soil in the above reservoirs, and the sewerage is then stirred to mix it well together, and after it
25 has been well stirred I let it stand for, say 30 minutes, to precipitate. After the solid matter has subsided, I draw off the water by means of syphons or otherwise, and from the solid matter so collected I make a fertilizing manure by adding as follows for each ton of the compound mass obtained, viz.: .6 bushels of carbonized waste tan in powder (or
30 the same proportion of coal ashes or saw-dust previously dried may be used); these I use as absorbents, to absorb and retain the ammonia and other gases and fertilizing matters contained in the sewerage or cesspool matter; and to the above absorbents I add, also, for absorbing the gases and fertilizing matters, 3 bushels of soot, 12 (lbs.) pounds
35 chloride of sodium or muriate of soda, 12 (lbs.) pounds nitrate of

Pinel's Improvements in Deodorizing and Manufacturing Manures.

potass or nitrate of soda, and to these are added about 1 peck of slacked lime for each ton; and so I form the above fertilizing manure; and 25 (lbs.) pounds phosphate of lime, and 35 (lbs.) pounds muriate of ammonia (or the sulphate of ammonia may be substituted with effect). I then spread the mass so compounded out to dry, and let it remain for drying, say from 8 to 10 days, when it is ready for the market. 5

Having now described the nature of my said Invention, and in what manner the same is to be performed, I further declare that what I claim in respect thereof is the Invention as herein-before set forth and 10 described.

In witness whereof I, the said Jacques Francisque Pinel, have hereunto set my hand and seal, this 2nd day of September, in the year of our Lord One thousand eight hundred and fifty-three. 15

JACQUES FRANCISQUE PINEL. (L.S.)

Signed & sealed in my presence,

F. W. CAMPIN,

Patent Agent, Strand.

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